SECTION 16452 - GROUNDING

A. SUMMARY

1. Grounding of electrical systems and equipment.

2. Standard: NFPA 70.

B. MATERIALS

1. Conductors.

2. Ground Rods: Copper-clad steel.

3. Test wells.

C. GROUNDING APPLICATIONS

1. Equipment grounding conductors with circuit conductors for the following:

   a. Feeders and branch circuits.
   b. Lighting circuits.
   c. Receptacle circuits.
   d. Motor and appliance branch circuits.
   e. Flexible raceway runs.
   f. Armored and metal-clad cable runs.
   g. Busway supply circuits.
   h. Computer outlet circuits.
   i. X-ray equipment circuits.
   j. Isolated grounding-receptacle circuits.
   k. Isolated equipment enclosure circuits.
   l. Nonmetallic raceways.
   m. Air-duct equipment circuits.
   n. Water heater circuits.
   o. Heat-tracing circuits.
   p. Antifrost heater circuits.

2. Signal and communication systems at each service location.

3. Service Grounding:

   a. Main Electrical Service: To ground rod and [**main water service**] [**Ufer ground**].
   b. Separately derived systems.

4. Metal poles supporting outdoor light fixtures.

5. Connections to lightning protection system.

6. Common ground bonding with lightning protection system.
7. Ground bus around perimeter of electrical room.
8. Ground loop around foundation perimeter.
9. Interior metal piping and metal air ducts.
10. Ufer ground.
11. Overhead Lines: ANSI C2.
12. Underground Distribution System: Ground rod at each manhole and handhole.

D. FIELD QUALITY CONTROL

1. Testing Agency: Contractor employed.
2. Test Procedures: IEEE 81, two-point method.

END OF SECTION 16452